

**REMARKS**

Claims 1, 2, 4, 5, 7, 9, and 10 are pending in this application. By this Amendment, claim 1 is amended and claim 11 is canceled without prejudice to, or disclaimer of, the subject matter recited therein. Support for the amendment to claim 1 can be found at, for example, Fig. 2. No new matter is added. Applicant respectfully requests reconsideration and prompt allowance of the pending claims in view of at least the following remarks.

**I. Personal Interview**

Applicant appreciates the courtesies shown to Applicant's representative by Examiners Lee and Ryan in the October 5, 2011 personal interview and the October 5, 2011 follow-up telephone interview with Examiner Lee. Applicant's separate record of the substance of the interview is incorporated into the following remarks.

**II. Rejection Under §112, Second Paragraph**

The Office Action rejects claim 11 under 35 U.S.C. §112, second paragraph. Claim 11 is canceled. Accordingly, the rejection is moot.

**III. Rejections Over §103(a)**

**A. Rejection Over Greiner, Farooque, and Kiku**

The Office Action rejects claims 1, 2, 4, 5, 7, 9, and 10 under 35 U.S.C. §103(a) as having been obvious over U.S. Patent No. 5,728,183 to Greiner et al. (hereinafter "Greiner") in view of U.S. Patent No. 5,084,362 to Farooque and U.S. Patent No. 6,908,069 to Kiku. The rejection is respectfully traversed.

Greiner and Farooque fail to disclose and would not have rendered obvious "a spring member interposed between the hydrogen exhaust valve and one of the first portion and the second portion to urge the hydrogen exhaust valve directly against the other one of the first portion and the second portion," as recited in claim 1. The Office Action acknowledges that

Greiner and Farooque fail to disclose the above-recited features; however, the Office Action asserts that Kiku cures the deficiencies of Greiner and Farooque.

However, as argued in the October 5 interview, Kiku fails to cure the deficiencies of Greiner and Farooque. First, the combination of Greiner and Kiku is improper. The Office asserts that it would have been obvious to a skilled artisan to combine the valve of Kiku with Greiner as modified by Farooque for the benefit of moving the hydrogen exhaust. However, the Office Action relies on Greiner for the disclosure of a hydrogen exhaust valve (one-way valve 43) as well as the direct fixation between the first portion (space 60) and the second portion (combustion chamber 25). Thus, the Examiner is asserting that the valve (43) of Greiner is replaced with the valve (4) of Kiku in order to provide the benefit of moving the hydrogen exhaust. However, such a substitution would render Greiner inoperable for its intended purpose (See MPEP §2143.01(V)).

Specifically, Greiner is designed in order to utilize a one-way pressure valve (43) so that, when the pressure in the space (60) is lower than within the cup (42), the valve opens. By replacing the valve (43) of Greiner with the valve (4) of Kiku, which does not use pressure as an indicator for the opening and closing of the valve, the valve (4) of Kiku would effectively render Greiner inoperable for its intended purpose of regulating the gasses passing through the water (col. 3, lines 42-60 of Greiner) since the valve (4) of Kiku is merely intended to change flow path areas and does not allow for the opening and closing of the valve in response to fluctuations in pressure. As discussed at col. 9, lines 36-52, the valve (4) of Kiku is not moved due to changes in pressure but is instead moved by a control unit (600). Thus, the combination of Greiner, whose valve is moved based on pressure changes, with the valve of Kiku, whose valve is controlled by a control unit, is improper because such a combination would render Greiner's modified device inoperable for its intended purpose of opening and closing the valve due to fluctuations in pressure.

Second, as agreed in the October 6 personal interview, Kiku fails to disclose that the spring member (69) urges the valve (4) directly against the second portion (asserted by the Examiner to correspond to the joint device 92). Additionally, contrary to Examiner Lee's assertions in the October 5 telephone conference, even if Kiku were interpreted such that the body (1) is the second portion and the joint device (92) is the first portion, Kiku would still fail to disclose the above-recited features. As argued in the October 6, 2010 Amendment and should the Examiner asserted this alternative interpretation of Kiku, the spring member (69) of Kiku is unable to urge the valve (4) directly against the second portion (base body 1). Specifically, the cylindrical valve (4) of Kiku is supported on one side by the direct acting shaft (67) (Fig. 2 and col. 8, line 65, to col. 9, line 12). Thus, the spring member (69) does not urge the cylindrical valve (4) against the base body (1) because the valve (4) is supported on one side by the direct acting shaft (67) that is fixed to the base body (1). For example, Fig. 2 illustrates that the spring member (69) fails to urge the valve (4) against the base body (1). Thus, Kiku fails to disclose and would not have rendered obvious Greiner and Farooque fail to disclose and would not have rendered obvious "a spring member interposed between the hydrogen exhaust valve and one of the first portion and the second portion to urge the hydrogen exhaust valve directly against the other one of the first portion and the second portion," as recited in claim 1.

For at least these reasons, claim 1 is patentable over Greiner, Farooque, and Kiku. Further, claims 2, 4, 5, 7, 9, and 10 are patentable for at least the same reasons, as well as for the additional features recited therein. Accordingly, Applicant respectfully requests withdrawal of the rejection.

**B. Rejection Over Greiner, Farooque, Kiku, and Bailey**

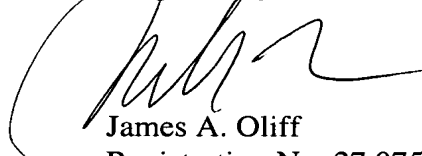
The Office Action and rejects claim 11 under 35 U.S.C. §103(a) as having been obvious over Greiner, Farooque, and Kiku and further in view of U.S. Patent No. 5,374,029 to Bailey. The rejection is moot because claim 11 is canceled.

**IV. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff  
Registration No. 27,075

Michelle K. Windom  
Registration No. 65,466

JAO:MQW/ysg

Date: October 20, 2011

**OLIFF & BERRIDGE, PLC**  
**P.O. Box 320850**  
**Alexandria, Virginia 22320-4850**  
**Telephone: (703) 836-6400**

**DEPOSIT ACCOUNT USE  
AUTHORIZATION**

Please grant any extension  
necessary for entry of this filing;  
Charge any fee due to our  
Deposit Account No. 15-0461